Vol.IV, No.9 November 1975 Monthly except during July and August Price $4.50 yearly Single Issue 75¢

Publisher, Jim Cranshaw

Second-class postage paid at Dallas, Texas Office Address: 9820 Silver Meadow Drive, Dallas, Texas 75217

214-286-1673

THE NEWSPAPER FOR
THE HOBBYIST OF VINTAGE
ELECTRONICS AND SOUND

THE HORN SPEAKER

Radio News for May, 1926

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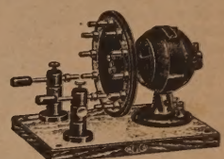

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Problems of a Radio Program Director

By CHAS. D. ISAACSON, Program Director, WRNY

HELENE KOSTER
Mezzo - Soprano, who appears at WRNY in the Light Opera Periods.

VICTOR WITTGENSTEIN
Well-known Pianist, who gave a recital over WRNY in advance of his new tour.

ISABELLE AUSTIN
Formerly of Roxy's Capitol Theatre Ensemble, who appears often at WRNY.

NORMAN SECON
Concert Pianist, who is a regular feature on WRNY programs.

SYLVIA RITTENBERG
Young debutante singer who is frequently heard over WRNY.

CAV. A. SEISMIT DODA
Famous vocal master and composer, who directs members of his studio in WRNY programs.

MARJORIE STUART
Who appears with a program of Oriental songs at WRNY on alternate Fridays.

RICHARD HAGEMAN
One of the greatest of American opera conductors, who directs a musical period at WRNY.

I WONDER if you folks who listen to the radio ever think about the program director—what he is trying to do? And what are some of his problems and handicaps and advantages?

The program director must sense instinctively what you listeners want to hear, and something more than that too, perhaps: what you should hear, what is good for you to hear, and what other people want to hear, who are right next door to you, and tuning in at the same time as you are.

Every station is governed by certain limitations. For instance, a program director in a little town can use only the available material. But in New York City, which is the gathering-place of the great in music, the stage, literature, arts, and every walk of life—they are all here. Take them if you can get them, but who, what, when, how?

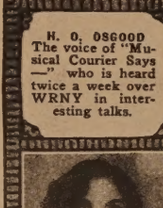
Some program directors, very naturally and logically, turn entirely to jazz entertainment. That is all that they think of, that is all that they want, that is all that they try to bring to the listeners—and they have listeners a-plenty. But some program directors—and the writer of these articles is one of them, feel that the public wants something more than the utterly jazz type of entertainment, at least part of the time. In fact, over at WRNY, we are strongly of the opinion that the kind of people we would like to reach and please, want their diet of entertainment so balanced that jazz and the purely frivolous occupy only a minor part of the menu.

THE EASIEST WAY—AND THE OTHER

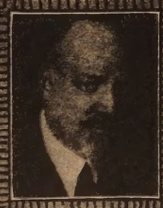
There is very little for the program director to do in putting on a jazz program. There is dance music, popular singers, some more dance music, another group of popular singers, and there it is! One thing is as good as another, all things being equal, and you turn the wheel and grind it out like a string of hamburger steak. But the moment that the program director seeks to vary his program, to supply a rounded-out bill, then come his problems.

How far can he go in seeking concert music, how high a standard may he set, how

THE UNION CITY FOUR
This banjo and mandolin ensemble is heard frequently from WRNY in medleys of popular songs—especially in the DX hours for our distant friends who listen in late.

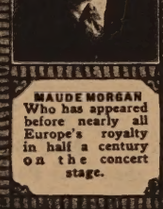


H. O. OSGOOD
The voice of "Musical Courier Says —" who is heard twice a week over WRNY in interesting talks.



JUDITH ROTH
One of the finest of the regular singers over the microphone of whom we know, a WRNY feature.

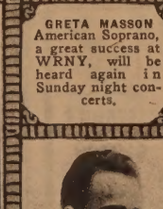
HERBERT SOMAN
Conductor of the Orlando Roosevelt Concert Orchestra, which you hear three times a week over WRNY.



MAUDE MORGAN
Who has appeared before nearly all Europe's royalty in half a century on the concert stage.

GORDON HAMPSON
Pianist and Composer, who conducts a light opera series at WRNY.

BETTY LANG
Singer of popular songs to her own accompaniment, a regular WRNY number.



GRETA MASSON
American Soprano, a great success at WRNY, will be heard again in Sunday night concerts.

LOUIS RICHLING
A baritone of many concert engagements, who is heard regularly over WRNY.

should he arrange to present his trios, quartettes, and other chamber music, his symphonic orchestras, his grand opera presentations? Shall they be given without explanation, without setting; or do they need something else which will open the mind, and arouse the imagination of the listener?

It is one thing to *plan* to present grand opera, symphonic music, concert programs. The next thing is to find the artists. The big artists are engaged with the opera companies, their contracts forbid them to broadcast. Or if they are not with the opera companies, they are demanding huge fees. What inducements can be offered to bring them to the station, to devote the time to rehearsals and performances?

Then, after the music, comes the theatre. How shall he bring in the theatrical companies, and induce the members of the casts to come up after their heavy performances? What shall be selected from the play, what is good in the play, what is interesting to the listeners? And so on down the line, ad infinitum.

THEY CAN'T SING—AND WILL SING

Of course, the program director is assailed by thousands of offers. Here are men and women who have the greatest subjects in the world—so they think—and so their friends sometimes think. Important officials, associated with companies in some way doing business with a station of its associate companies, have their favorites whom they want to put on the air. How to eliminate these is another problem of the program director: how to know how to drop what is not essential or of sufficient interest.

There may be something extremely interesting, entertaining, important, on the program; how can we let the public know about it?—there is another question. How make the newspapers realize that here is an offering which deserves attention?

I mention some of these things because, as our listeners coming behind the scenes at WRNY would quickly realize, what is presented on the air is not haphazard, is not without its advance development and preparation. Fifteen minutes and a whole idea has come and gone. You have heard it—you have forgotten it; and yet weeks and months have gone into the development of that fifteen minutes. Often listeners are entirely too off-hand with their attitude toward that which they hear on the radio.

WHAT YOU OWE TO RADIO

To be sure it is given to them. It comes from this station, that station or the other station. You can tune in to any station at any time, or tune it out at any time. Imagine that you could walk down Broadway in New York, or State Street in Chicago, and into any theatre at will; and walk out again without any payment, or even "I thank you." Imagine that! And yet that is your situation on the radio.

It, therefore, becomes not only your privilege but your duty to help—help the program director, help the artists, help the stations—not only WRNY, but every other station. Otherwise, radio is going to make us entirely too lazy, too indifferent, to our own responsibilities.

I am reminded of the statement once made by a public speaker who said: "The reason I object to socialism is not that it divides property and gives a closer and equal division of opportunity, but because it fails to carry with it a division of responsibility. If socialism will say to me, 'Yes, let us divide

property, but let us also divide duties and work,' I would be for socialism to the last degree." Radio listeners can help radio broadcasting and radio development by devising a way of aiding program directors and artists in lieu of the fact that they cannot pay for their entertainment under the present system.

RECENT ACTIVITIES AT WRNY

The hero of the "President Roosevelt," Captain George Fried, paid a visit with his entire retinue, to the studio of WRNY. Captain Fried spoke feelingly about the American merchant marine and the need for its development; and Mrs. Fried made her only public address over the radio. In remembrance of the occasion, WRNY will present Captain Fried with a gold embossed memento, which he will receive on his return to New York. WRNY broadcast also the reception to Captain Fried in the Winter Garden and in the ballroom of the Roosevelt.

The Radio News Prize Play, "The Hidden Witness," was effectively presented by the Radio Theatre Players, under the direction of Al. Rigali.

Among the newcomers to WRNY are Richard Hageman, one of the world's greatest conductors; Lazar Samoiloff, teacher of eminent artists such as Rosa Raisa and others; A. Seismit-Doda, Julian Huarte, the Spanish composer, Victor Wittgenstein, Madelaine Braid, Claude Warford, and Sergei Klibansky; and so on through a long list of eminent names. The pipe organ has been added to WRNY's instrumental series. Rock Ferriss, who is the conductor of these organ recitals, has been chapel organist at Princeton Universty.

In the "Up and Down Broadway" Review, the Yiddish Art Players, producing the famous success, "The Dybbuk," broadcast; as did the cast of "A Weak Woman," "Port o' London," and other companies.

The Catholic Circle brought Father Wynne; the Jewish Circle, Dr. Lee Frankel; and the Protestant Circle got under way with the Rev. Mr. Megaw.

Many interesting novelties were added on Novelty Night, which included a Lincoln's Day Birthday program, a Poets' Symposium, and the "Presidential Inaugurals." Perhaps you listened in when Texas Guinan and Vincent Lopez and nearly fifty other popular entertainers were on the air.

The Debut Hour is now under way. Each Monday night new talent is presented to WRNY's radio audience and the feature, inaugurated only recently, has become a very popular one.

A Pretty Poor Rectifier

1922 ad

To Receive Broadcasting Radiophones

THE RADIOHOME RECEIVER

The Radiohome Receiver

THE DT-800 AMPLIFIER

Every amateur is frequently being asked for advice as to what set should be purchased for the reception of radio telephone programs of music, news and stories. Many an amateur hesitates to recommend the standard amateur equipment as, to the average citizen, such terms as coupling, condenser, tube and "B" battery, mean nothing, and his friends would be confused and bewildered by the array of controls on the average set.

We illustrate two pieces of radio receiving apparatus which will, doubtless, appear unfamiliar to the amateur field. Yet we have been manufacturing these sets for some time—for the general public. The Radiohome Receiver has a simple, two-slide tuning circuit with a range of 145-800 meters, a vacuum tube detector, and grid leak and rheostat. The price—less tube, batteries, receivers and antenna—is $36. In a cabinet that is identical in size and finish with the cabinet of the Radiohome, is the DT-800, two-step amplifier. Three phone jacks are embodied in this instrument for detector, 1st step and 2nd step. Less tubes and batteries the price is $35. We believe you will find no other set on the market to compare with this combination for the reception of radiophone programs by the newcomer in the field.

Catalog H, listing ALL DeForest Equipment has been out five weeks. It is yours for 12c in stamps.

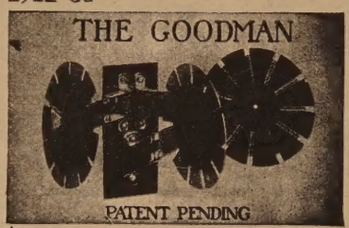
The DT-800 Two-Step Amplifier

DeForest Radio Telephone & Telegraph Co.

NEW YORK CITY

This article of 1926 from Radio News illustrates the quality of programs that came from the horn speakers of that era.

1922 ad



$6.00 !!!

Nuff Sed

Send for Pamphlet

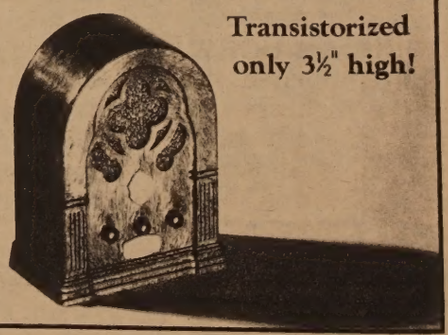
MADE AND SOLD BY
L. W. GOODMAN
Drexel Hill, Pa.
WHOLESALE DISTRIBUTORS
THE SAYRE-LEVEL RADIO CO.
905 Filbert Street, Phila. Pa.
Order direct or from your dealer

1975 ad

you'll have fun with this....

Old Time Radio

Transistorized only 3½" high!



OLD TIME TRANSISTOR RADIO

ONLY **9.90** Postpaid

Remember the good old days . . . when everyone sat around the parlor listening to the radio? This is a miniature copy of that famous cathedral-style old-time radio and measures 3½ x 1½". Our model has five transistors and two diodes and comes in handsome wood-grain plastic case. A wonderful piece of nostalgia. Uses one 9-Volt battery which is included. Each comes gift-boxed.

WALTS EMPORIUM

P. O. BOX 19406
DALLAS, TEXAS 75219
EVENINGS 214-262-7855

PUETT ELECTRONICS 1975 AD

P.O. BOX 28572 DALLAS TEXAS 75228

SEND A SELF-ADDRESSED STAMPED ENVELOPE FOR OUR NEW ACQUISITIONS LIST - 01A, 99 and other hard to get tubes.

ANNOUNCING THE NEW CLASSIC RADIO NEWSLETTER FOUR PAGES, SIX ISSUES PER YEAR, $5.00 PER YEAR. STARTS JAN. 1975.

SILVER GHOSTS

BY JWF PUETT

PHOTOGRAPHS - SCHEMATIC DIAGRAMS-STORIES OF EVERY KNOWN RECEIVER MANUFACTURED BY THE EH SCOTT RADIO LABORATORIES $10.00

WE ARE SLOWLY BUT SURELY RECEIVING MORE ORDERS FOR SILVER GHOSTS. WE HOPE TO GO TO PRESS WITHIN FOUR TO SIX WEEKS. THANK YOU FOR YOUR PATIENTS.

Official!

LEOLA LUCEY has sung to front rows adorned by Broadway's blasé first-nighters. She has trilled to balconies packed with explosive gallery gods. But the most difficult audience she has ever confronted is shown in this photograph.

It is the official tone-test of her newest RE-CREATION—made in the Edison Recording Studios, Fifth Avenue, New York.

The musical comedy star stood next to the new Edison. Fourteen pairs of musically-cultured ears listened for any difference while Miss Lucey compared her silvery voice with the new Edison's RE-CREATION of her voice. The RE-CREATION flowed forth with every touch of art and every physical quality of the singer's voice. Miss Lucey's voice and its RE-CREATION were without a shade of difference. The judges pronounced the RE-CREATION "official."

Study this picture—think what it means. If a record is truly the voice of a singer, it should pass this test, shouldn't it? That is why Mr. Edison insists on such comparison.

Broadway's song-hits and opera's classics, when RE-CREATED by the New Edison, thrill you as deeply as they do when heard in the theatre or opera house.

The NEW EDISON

"The Phonograph with a Soul"

Our new de luxe catalog, a complimentary copy of the magazine, "Along Broadway," and the booklet, "What the Critics Say," will be sent you from the Edison Laboratories upon request. Write to Thomas A. Edison, Inc., Orange, N. J.

SCIENTIFIC AMERICAN
SEPTEMBER 14, 1889.

WITH MR. EDISON ON THE EIFFEL TOWER.

R. H. Sherard, representing the *Pall Mall Budget* (London), relates as follows his interview with Mr. Edison in Paris :

This is what Edison wrote to me, says Mr. Sherard, when I proposed he should grant me five minutes talk with him :

"All right. Friday about eleven in morning. I'll be sane by that time. My intellect is now making 275 revolutions a minute."

I called at the Hotel du Rhin at eleven o'clock, and was shown up to the handsome drawing room on the first floor. Edison was standing by the mantelpiece. At a secretaire by the window were Colonel Gouraud, Mr. Durer, and others ; at the far end the sweet girl wife Mrs. Edison, surrounded by various persons. It is always difficult to begin, for one who has come to annoy, but I plunged into matters at once.

THE ORE-EXTRACTING AND THE FAR-SEEING MACHINES.

"About this ore-extracting machine," Edison said, "it's going to be a great thing. Already we have eighty machines at work in the iron mines. Yes, it is adapted for iron ore only as yet. I am studying the question of a machine for treating both refractory silver ore and gold ore, and shall get them out by and by. Then we shall make more money."

"The far-seeing machine ?"—"I have heard," he said, "that some European inventors claim to have preceded me in this, but I do not know anything about their inventions. My machine is getting on very nicely. I do not think it will ever be useful for very long distances, and it is absurd to say that it will enable one to see another ten thousand miles away. In a city, however, it will be of practical use. I don't look for anything further, at least at present."

THE PHONOGRAPH AND THE PRESS.

"The phonograph ?"—"We have got it into practical form. Already 1,800 machines are in use in commercial houses, and our factories are now turning out forty machines per diem. I have also, at last, been able to make a perfectly solid mailable cylinder, which can go through the post for any distance without risk of damage. All this has been very hard work. On the tools for making the big phonograph alone we spent $5,000. I have also created a small model—a pocket phonograph, if you like to call it so—the cylinder of which will take 300 words, the length of an ordinary letter, and which will be very practicable for ordinary correspondence. I have the model here, and you can see it any day you like. These are not, however, yet ready for sale."

"What use can newspaper people make of it ?"—"Oh, plenty. It is already used in the *World* office. The machine is placed downstairs. The reporters come in and talk into it. The cylinder is taken upstairs to the composing room, and the compositors set up from its dictation. They attain much greater speed, make more ems in an hour than on the old system, and earn more money."

IMPRESSIONS OF PARIS—"WHEN DO THEY WORK ?"

"How are you impressed with Paris ?"—"Oh, I am dazed. My head's all in a muddle, and I reckon it will take me at least a year to recover my senses. I wish now that I had come over in my laboratory blouse, and could have gone about unknown and have seen something. The exhibition is immense, larger than our Philadelphia exhibition. So far, however, I have seen but very little of it. This morning, however, I saw a tool which will save me $6,000, clear, a year. It is a chisel worked by hydraulic pressure. I just saw it, passing by—just a glance. I shall order some, and send them out. They will enable us to reduce our labor by eighteen hands." "That's a good morning's business," said Colonel Gouraud. "Yes," said Edison, and continued: "What has struck me so far chiefly is the absolute laziness of everybody over here. When do these people work ? What do they work at ? I have not seen a cartload of goods since I came to Paris. People here seem to have established an elaborate system of loafing. Some of these engineers who come to see me, fashionably dressed, walking stick in hand—when do they work ? I don't understand it at all."

EDISON'S RELIGION OF WORK.

"Over here we hear wonderful stories of your working. You have the reputation of being able to work twenty-three hours a day for an indefinite period."—"Oh ! I have often done more than that, haven't I, Gouraud ? As a rule, though, I get through twenty hours a day. I find four hours sleep quite sufficient for all purposes."

"I see you smoke. It does not harm you ?"—"Not at all. I smoke about twenty cigars a day, and the more I work, the more I smoke." Some one remarked, "Mr. Edison has an iron constitution, and does just everything contrary to the rules of health. Yet he is never ill."

Edison pronounces the words "work" and "working" as some do "prayer," "religion." It is also a religion, it is true.

UP THE EIFFEL TOWER WITH EDISON.

I asked : "Beyond the far-seeing machine and the rest, are there projects ?"—"Any number," said Edison. "When we make our big exhibition in America, I shall have to have several new things." It is perfectly useless to ask Edison for information as to ideas. In him everything is so practical that it seems he cannot talk about what is phantom merely. It is the "what is" with him, and not the "about to be."

Mrs. Edison then asked the Cavalier to do her the pleasure of lunching with her, *chez* Brebant, on the Eiffel tower. Colonel Gouraud asked me to be of the party, and together we went on to order breakfast. *En route* the Colonel asked me to contradict a story which has appeared that he brought to Edison a phonographic message from the Queen. "Mr. Edison received messages from the Queen of Italy, from the King, and from the Prince of Naples. I suppose that is what the story was based upon."

PREPARING TO OUTTOP THE TOWER.

"When on board the ship," said Edison, as we sat down to *dejeuner* on the terrace of the Eiffel tower, *premiere etage*, "they put rolls and coffee on the table for breakfast. I thought that that was a very poor breakfast for a man to do any work upon. But I suppose one gets used to it. I would like one American meal for a change—plenty of pie for a change." He then smashed the roll with his fist.

There were six of us—Mr. and Mrs. Edison, Colonel Gouraud, the Cavalier, and Mr. Durer, the author of a very remarkable brochure on Edison. And we had the world at our feet. There were shrimps among the *hors d'œuvre*. Edison had never seen any. "Do they grow larger ?" he asked, and added, "They give a great deal of trouble for small results."

"This Eiffel tower ?" I said.—"The work of a bridge builder," said one. "No," said Edison decisively. "No. It is a great idea. The glory of Eiffel is in the magnitude of the conception and the nerve in the execution. That admitted, and the money found, the rest is, if you like, mere bridge building. I like the French," he added. "They have big conceptions. The English ought to take a leaf out of their books. What Englishman would have had this idea ? What Englishman could have conceived the statue of Liberty ?"

"Will you beat the tower in New York ?"—"We'll build one of 2,000 feet. We'll go Eiffel 100 per cent better, without discount."

IS A THOUGHT-RECORDING MACHINE POSSIBLE ?

"Could not," I asked, "a machine be made which could be adapted to the head, and which would record one's thoughts, saving the trouble of speaking or writing ?" Edison reflected. "Such a machine is possible," he said ; "but just think if it were invented. Every man would flee his neighbor, fly for his life to any shelter."

As they brought in the *filets a la Brebant*, I said, and thought of little Dombey, "What is electricity after all ?" He said, "It is a mode of motion, a system of vibrations. A certain speed of vibration produces heat ; a lower speed, light ; still lower, something else."

THE REIGN OF HUMBUG.

"Is there anything in electricity as applied to medicine ?"—"There is a great deal of humbug in all that," he said. Then as a careful *maitre d'hotel* brought in the cradled *Clos Vougeot*, and served it with exaggeration of anxious ceremony, he added, "There is a great deal of humbug about wine too. And about cigars. Men go by cost. The connoisseurs are few. At home, for fun, I keep a lot of wretched cigars, made up on purpose in elegant wrappers, some with hairs in them, some with cotton wool. I give these to the critical smokers, tell them they cost 35 cents apiece. You should hear them praise them."

THE EDISON "SANATORIUM."

We talked of cooking and of famous *chefs*. Also of one who recently engaged a French cook at a bishop's salary. "Bright's disease of the kidneys is all the dividend that man will draw," said Edison. He seems to take delight in commercial phrases. It is comfortable to hear him pronounce the words "make money." Commerciality with him is dignified and impressive, vulgar as it is with others. The breakfast was *recherche* in the extreme, but Edison barely touched anything. "A pound of food a day is all I need when I am working, and now I am not working." One could not help thinking of Chatterton and his crust.

After dessert there was champagne, and toasts were drunk. The Cavalier began. Edison said : "The Cavalier is profuse, but not so much so as another Italian gentleman who once proposed my health, and remarked that even the chickens in his country knew my name.—It's a regular sanatorium," he remarked later on, "so much 'health' being distributed." Again, "All this is new to me," alluding to the ceremonial of our festivities. "If I stay long here I shall too soon be able to get up and make speeches and wave my arms." When the coffee and cigars came in his face brightened up. "Mr. Edison is beginning to breakfast," said the Colonel. 'Yes," said Edison, taking an Havana ; "my breakfast begins with this."

THE MAN AND THE MONUMENT.

A few minutes later, happening to pass the tower, I saw at its foot again the man, with his face boyish almost for its openness, and the gray hairs over the unwrinkled forehead. Then I looked at the monument first and then at the man. The monument thus contrasted appeared infinitesimally small.

The Deadly Alternating Current.

The East River Electric Lighting Company, at its dynamo house, East 24th St., this city, employs the Thomson-Houston system of electric lighting, using in all its outside lamps the direct current. But in the dynamo room is one machine which generates the alternating current, and this is used to supply the incandescent lights in the building, and, recently, for experiments by the Perry Motor Company. This one machine generates 1,000 volts power, and has not been long in the building.

On September 2, says the *N. Y. Times*, something went wrong with the switchboard connected with this machine, and Darwin A. Henry, the superintendent of construction of the company, undertook to set it right. He climbed up on the short ladder used to reach the switchboard, and started in on his work. He had been thus engaged for about five minutes when he attempted to turn part way around on the ladder. In some way one of his feet slipped, and for an instant he was in danger of losing his balance. Instinctively his arms were thrown up to recover himself. One hand came in contact with the negative terminal on the board, and hardly had he touched it when the other had struck the positive pole. The effect was instantaneous. The unfortunate man's hands remained as if glued to the death-dealing wire, his head dropped over on one shoulder, and in that position he remained for some moments. He did not utter a sound. There were two other men, named Thomason and Smith, working in the room, and one of them after a few seconds caught sight of his chief resting apparently with all his weight against the switchboard. Both men rushed to his assistance, but the man was dead. They tore his hands from the wires and lifted his body down and laid it on a bench. One of his hands—the right one—was terribly burned, the flesh having been consumed to the bone. The other hand was burned, but not so very badly.

Medical help was at once summoned. Dr. L. D. Henderson and Dr. W. C. Feeley were at the superintendent's side within ten minutes, and worked hard in trying to restore animation, but they might as well have tried to put life in a stone. They injected, hypodermically, quantities of brandy. Sylvester's system of artificial respiration was called into use, and they tried with a galvanic battery to bring the man back from death. But all efforts were absolutely useless, and after two hours of hard work the weary physicians were obliged to abandon their task and declare their patient dead.

There had not been a single evidence of life in Henry from the time he touched the wires. When the doctors reached him, the heart had ceased to beat and

there was no sign of respiration.

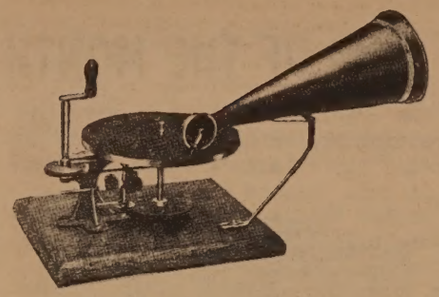
In the opinion of both physicians, Henry's death was instantaneous, and, if the absence of any contortion either in body or face proved anything, it was a painless one. The burns in the hand, both the physicians and the employes in the building believe, were caused when the hands were torn away from the wires and after the man was dead. The separation created an arc, and without an arc there can be no burns.

Mr. Henry was about thirty years old, unmarried, and had been a practical electrical engineer from his boyhood. He was a capable electrician, and had much experience in handling electric apparatus, and was highly regarded by his employers.

The final argument on the question of the constitutionality of the new electric execution law, a question which involves the disputed power of an alternating current to kill, will be held at Buffalo within a fortnight, and this case may have considerable weight in the argument. It is proposed to use an alternating current of from 1,500 to 2,000 voltage in these executions, and it is contended that that force would not be sufficient to kill. In this case a 1,000 volt current, even when only accidentally applied, did its awful work effectually.

SCIENTIFIC AMERICAN, Sept. 14, 1889

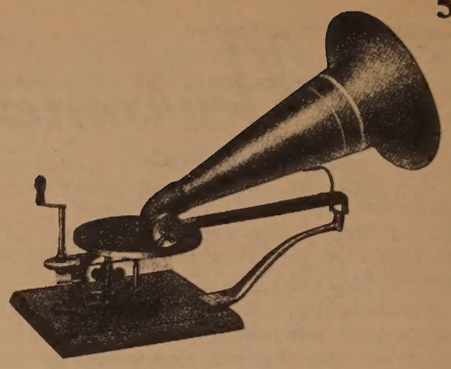
"IMPROVED" GRAMOPHONES
of 1900
by
Eldridge Johnson
Consolidated Talking Machine Co.



Toy

MAKES THE CHILDREN HAPPY

The Toy Talking Machine with ten-inch japanned horn, toy sound box, perfect governor, with speed regulator, neat base-board, record with six children selections, 100 needles, uses the regular standard record. A wonderful talking machine for the price **$3.00**

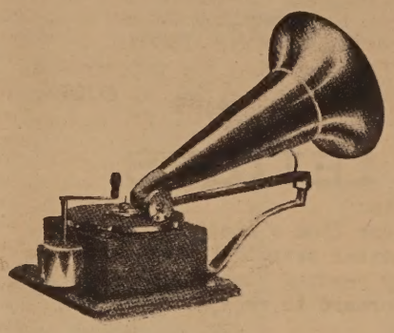


Type "D"

The type "D," with latest improved exhibition sound box, standard japanned amplifying horn, perfect governor, with speed regulator, operated by hand, neat baseboard, 200 needles **$6.00**

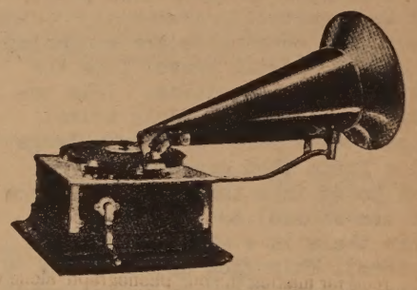
Type "A"

Type "A" with latest improved exhibition sound box, 16-inch japanned horn, japanned metal motor case on neat base-board, 200 needles and needle case **$12.00**



Type "B"

Type "B" with latest improved exhibition sound box, standard japanned amplifying horn, highly polished oak cabinet, 200 needles and needle case . . . **$18.00**



Type "C"

Type "C," latest improved exhibition sound box, standard burnished brass amplifying horn, elegant piano finish ornamental cabinet, 200 needles and needle case **$25.00**

1924 ads

THE LAST WORD IN AERIALS

The Greatest Improvement In Radio Within the Past Year

Here it is at last—the very thing you have been looking for—a Non-Directional Aerial that can be used anywhere and on all makes of receiving sets. No longer is it necessary to string unsightly wires or be bothered with cumbersome aerials that pick up only from certain directions. THE PORTABLE GLOBE AERIAL, as the name indicates, is not only portable but collapsible, ornamental and, above all, mechanically perfect, bringing in messages no matter where from or how far away.

Patent Pending No. 690459

It Is the Only Aerial that Is Non-Directional

Quick installation is another feature. It can be installed and used on the roof, hung out of the window, or in any room at home, at the office, in hospitals, on trains or ships, or out in the woods and summer camp, especially adapted for tourists. In its operation it is more selective and tunes much sharper and clearer with less static. The Portable Globe is the only Aerial to use in congested cities and crowded apartments where usually the interference is great, but which interference with the Globe is entirely eliminated. It is made of the finest Phosphor Bronze Spring wire with the Duco water and weatherproof finish—attractive as well as serviceable—a wonderful value, featured at a price within the range of everyone.

OPEN CLOSED

Order Today—Satisfaction Guaranteed

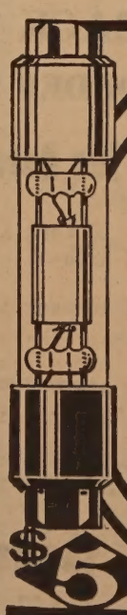
Send in your order now. Be among the first to show your friends the latest and greatest improvement in radio.

Send money order or will ship C. O. D. **$10.00** Parcel Post Prepaid to your door.

The Portable Globe Aerial Co.

1604 Locust Street St. Louis, Mo.

"AN ATTRACTIVE PROPOSITION TO JOBBERS AND DEALERS WHO ORDER IN QUANTITIES"



London Hawaii -Porto Rico

A Canadian amateur (T. A. Crowe, Calgary), operating on three Myers Tubes, heard the concert broadcasted by 2 L.O., London, England, and picked up Hawaii and Porto Rico the same evening. (Calgary Herald, April 1st). Are you getting results like this? You can with

Myers Tubes

Practically Unbreakable

They banish the noise that spoils reception and give wonderful volume and clarity to long-distance messages. Myers Tubes function perfectly as Detectors, Amplifiers and Oscillators. You can't break 'em unless you deliberately try. Two types: Dry Battery and Universal for storage batteries. (4 volts)

Demand Myers Tubes at your dealers or send price and be Supplied postpaid. See words 'Made in Canada' on each tube. Others not guaranteed.

Complete with clips ready to mount. No extra equipment required.

$5

E.B. Myers Co. Ltd.
Radio Vacuum Tubes
240 CRAIG STREET, W.
MONTREAL, CANADA

The Newcomer

By O. H. McDonald

In order for the newcomer collector to understand the various applications of the vacuum tube in the field of radio it is very essential to learn the electron theory of electricity. This is the only theory that adequately explains the action of the three element vacuum tube. Therefore, let's think in terms of electrons. I want to help you restore the luxury sets as well as the Crosley Pups.

Matter is composed of atoms. These atoms are made up of many many electrons which are considered negative electricity. These electrons are the only part of electricity that move, so to speak. When a matter or potential has some of its electrons removed the potential becomes positive with respect with what it was normally. Likewise, when electrons are added the potential is negative.

When two potentials are connected, the electrons will travel from the negative to the positive. This potential can be measured in volts. The potential difference or voltage is the force that causes the electrons to go from the negative (where they are stored) to the positive (where there is a shortage or room for them). This flow of electrons is the current flow and is measured in amperes.

For illustration, let's consider a water pump connected to a pipe, and the other end of the pipe connected back to the pump. The stronger the pump the more water will flow. Looking at the electric circuit we can compare the voltage to the pump and the electron flow would be represented by the water flow.

There are two forms of voltage or force that causes current to flow. Direct voltage causes direct current to flow (D.C.) this means that the electrons flow in the same direction all of the time. Batteries always produces a direct voltage and cause a direct current. Alternating voltage (house plugs, generators) actually causes the current to flow in one direction and then the other. Actually the current also alternates. This A.C. actually builds up from zero to maximum, then decrease to zero, then builds up in the opposite direction to maximum then decrease back to zero. This takes place each cycle. 60 cycle house current does this 60 times a second.

Any load or resistance in an electric circuit causes the electrons or current to have a harder time flowing and actually slows the flow. This could be illustrated by a partial plugging of the water pipe previously mentioned. This resistance in an electric circuit is measured in ohms.

Continued next month.

FIND OF THE MONTH

The Freeland Model R6 is very interesting and rates as a "Find of The Month," but I haven't taken a picture of it yet. Was on a bike ride with my nephew this summer and passed an estate sale. The radio is in a lovely drop-leaf table and was working and in mint condition! I got it for $15.00! It now sits proudly in the dining room and is used as a serving table.

To make my Antique and Vintage Radios more useful, I pick up any one of 10 fine-arts FM stations on my McIntosh MR-78 Tuner, connected to a small AM transmitter at 640 KHZ. Never listen to the modern McIntosh system, just put the FM through the old radios! It's more fun that way and one can concentrate on the beauty of the music itself and not the "Hi-Fi" sound.

Sincerely,
Richard Modafferi
Rd. 1, Skyline Drive
Vestal, N.Y. 13850

Note: I cannot find any reference to this radio in Ryder, Sam's, McMahon's or any old magazines! HELP!

LETTERS

Dear Jim:

Please find a check for $4.50 for another year of The Horn Speaker. I enjoy reading your publication and look forward to receiving it each month.

I have been collecting and restoring battery radios for just a few years now and I have a couple of questions that either your readers or yourself might be able to answer:

1. I find some radios with a faded brownish bakelite panel. Were these orginally brown, or black that has been oxidized? And, is there any way to restore them back to the way they were? And 2. I've come across many so called "kit" radios, but have been unable to find any information about these early "kits". Where do you find info. about companies manufacturing these and just what did the kits contain? How much had to be fabricated by the builder?

Please keep up the good work and couldn't you give us some idea of your own background and interests.

Sincerely,
Roger A. SanSoucie
246 Island Pond Rd.
Manchester, N.H. 03103.

Editor: On question no. 1, I have cleaned a brown scum off of black panels with fine rubbing compound. No. 2. I usually get the kit information from another collector.

I am a 45-year old commercial artist who likes to collect information and restore collectibles.

Dear Jim:

In response to the call for information on cords for radio speakers and phones. I have a telephone supply catalogue that sells many types of cords for old telephones. I have their catalogue showing cords. The address is; Billard's, 21710 Regnart Road, Cupertino CA 95014.

I have one of these cords on an old wall type telephone I restored, it is brown silk cloth covered and is tip-tip-spade-spade type connectors, also they list 3 and 4 conductor cord for sale. Readers write for information.

Sincerely,
Gale Urbainzick
2713 Thinnes St.
Cross Plains, Wisc. 53528

BACK ISSUES

ORDER NOW!

The Horn Speaker

All 20 back issues for 1973 and 1974.....$10.00

All 10 back issues for 1973 .....$5.00

Any issue from January 1973 to now.....50¢ea.

Later, we should have complete volumes for 1972.

The Horn Speaker

Box 12 Kleberg, Texas 75145

MART

Classified ad rate: 6¢ per word.
Photo ads: $2.00 extra.

MISC.

GET THE ORIGINAL look and sound from that old Radio or TV. Contact Fred Geer Restoration Artist, 6042 Brookridge Rd., Jacksonville Fla. 32210. Phone: 904 771-7828.

FOR SALE: Rubber stamp with your name and address plus AK Radio and speaker $3.00pp. James Fred, P.O. 42, Rossville IN 46065.

FOR SALE OR TRADE

FOR SALE: Complete set of QST Magazine. Write or send SASE for information. Paul Giganti, W6GVY, 2429 San Carlos Ave., San Carlos CA 94070.

TRADE: Will trade good DeForest Spherical Audion for Western Electric Double Button Microphone in Model 1A Cage. Paul Giganti, W6GVY, 2429 San Carlos Ave., San Carlos CA 94070.

FOR SALE OR TRADE

FOR SALE OR TRADE: One dozen Edison cylinder phonographs for sale, all complete with horns, reproducers, etc., all in excellent working order and appearance, included are 4 standards (one square std.) two of which are equipped with diamond "B" reproducers for 4 minute Blue amberol records, one is equipped with original & undented metal Cygnet horn,- also two model "A" firesides, both are combination 2 & 4 minute players, one Gem two & four minute player, two Home players,- one is a 2 and 4 minute player, the other a suitcase model with beautiful red banner the other 4 players are all Amberolas, two table models and two floor models.

Also for sale are eight uprights, two of these are diamond Disc Edisons, both have unusual & beautiful cabinetry-one has a new, old stock Edisonic reproducer, also among the uprights is a Wicker model, in A-1 condition, also have a rare 1909 Columbia Grafanola with serpentine (round) mahogany cabinet with lions heads-absolutely beautiful(I paid $1,000. for it). The other uprights are Victor and Columbia models-all in excellent condition.

Also for sale are three table model disc record players, one is a Victor IV with large mahogany horn, one is a "Model A" Std. talking machine, it has a metal morning glory type horn, the other is a very early exposed works machine with a fluted brass horn-all these are also excellent in appearance and working order.

Also have two oak cylinder record cabinets-one is round and you would have to see it to appreciate it. I have several extra reproducers for Edison cylinder players and a number of extra reproducers for disc players-three of which are new, never used in original cartons.

I would prefer to sell all to one party and as a bonus incentive to potential purchaser there will be no charge for the extra reproducers, cyl. or disc-no charge for numerous tin needle boxes & record dusters & no charge for 5 large horns-3 are morning glory-one is for Edison Concert (long brass horn) & one is large paper mache, no charge for 50 cyl. records and one original floor stand.

Will sell everything mentioned for $8,000.00 - so C'mon guys double your money. Will sell machines & parts individually if no one buys all of them. Interested parties contact George Benoit, 272 E. Goodman Rd., Olive Branch, Miss. 38654. Phone; 601 895-5384.

CLOTH COVERED POWER CORD. New 2-conductor cord as used on AC sets of the twenties, thirties, forties. From old stock, limited quantity. In brown or gold 25¢/foot. Please add 50¢ for mailing. Warren Dewey, 5021 Ambrose Ave., Los Angeles, California 90027.

FOR SALE OR TRADE

FOR SALE: Antique Televisions from 1930s and 1940s. Group of 38 different models, brands. 18 duplicates. Sell individually or as group. Send $1.00 for picture and information. Siedel, 614 Grove Lane, Santa Barbara CA 93105. Phone: 805 687-7967.

FOR SALE: #1. Crosley Radio $80.00.
#2. No name $70.00.
#3. Philco as is $60.00.
Also RCA Model 85T1 $50.00 or all 4 for $200.00. Seidel, 614 Grove Lane, Santa Barbara CA 93105. Phone: 805 687-7967.

FOR SALE OR TRADE: Early QST's, CQ's, Radio, call books, handbooks, tubular Audiotrons, Electron relays and early receivers & parts. Erv Rasmussen, W6YPM, 164 Lowell St., Redwood City, California 94062.

WD11 Adaptors, use UX199, 120, VT24. No wiring changes, Radiola III's battery hook up included $5.25pp., 2 for $9.25. Keith Parry, 17557 Horace St., Granada Hills CA 91344.

FOR SALE: Radio collection including battery sets, AC sets, horns, speakers, tubes, literature, and misc. As a package only for $2800, no shipping. Don Knotts, 3158 N.E. Azalea, Hillsboro, Oregon 97123.

FOR SALE: Solid State power supplies for operating battery radios. G. B. Schneider, 6848 Commonwealth Blvd., Parma Hgts., Ohio 44130.

Miscellaneous

DON'T DIE without a WILL!
Blank will form protects your family. Only $2.00 guaranteed. Order today! COE Enterprises, Box 259, 75 Coe Dr., Mesquite, Texas 75149.

WANTED

WANTED: Table cabinet for Kennedy XV. Small knob with pointer for Zenith 4R. Arthur Harrison, 1021 Falcon Dr, Columbia MO 65201

WANTED

WANTED: 1936-1937 RCA All Wave Magic Brain radio table or console. Models; 15K, 13K, C13-2, C15-4, 10K, 10T, 9K2 and 9T complete console or chassid only working condition or as is. Dave Freidinger, 1019 N. 29th., Omaha, Neb. 68131.

WANTED: Edison phono "OPERA" case, Edison "Fireside" case lids, Edison CYGNET horns, Zonophone "Concert" rear mtg. horn bracket, and extended turntable, XI Kennedy chassid, AK-5, AK-12 audio cluster, Radiola "25" loop ant., dial escutcheon, Radiola X both dials complete or junk chassis, Astatic #2 cartridge. C. Ferrett, 39400 DeAnza, San Jacinto CA 92383.

WANTED: Acoustic phonographs, records, literature, advertising, catalogs, accessories, records, parts: Berliner "Trademark" reproducer; "Automatic" reproducer, shaver, lid for Edison "Suitcase" standard, Columbia nickel plated horn. John T. Hoffman, 649 Washington Ave., Bremerton, Washington 98310.

WANTED: Westinghouse DA detector Amp. 3 tube works or complete unit. Federal 61, Edison battery parts, 4H filler caps, connectors and electrolyte salts. WD11 to UX adaptors. Small end of Edison #10 Cygnet Horn. Wayne Wright, Pocahontas VA 24635.

WANTED: Service manual for Radiola 26 (Xerox copy fine) or instructions pertinent to servicing one. Please quote price. All letters answered, any help appreciated. Jim Pollard, 4107 Loma Alta Dr., San Diego CA 92115.

WANTED: Radio - all 1920, 1921, Oct. 1922. Many Wireless Age 1920, 1925, Q.S.T. Feb, March 1920. Radio Craft Aug. 1929, Feb. 1931. Thompson, 2930 Delavina, Santa Barbara CA 93105.

WANTED-ARRL Handbooks for years 1936 and 1939, also west coast Radio Handbooks for same years. Advise price and condition. E. V. Brant, 6465 Sterling Ave., Detroit, Mich. 48202.

WANTED: Crystal sets, battery and electric radios and televisions Mfg. before 1935. Need all related items. Will buy one set or complete collection. Young, 11 Willow Court, Totowa, N.J. 07512.

WANTED: Wire recording items--unusual only, not Webster or Silvertone. Pre-1940 television and pre-1950 disc recording books, Layer, AV-SFSU, 1600 Holloway, San Francisco CA 94132.

RADIO items and toy trains wanted. Write Box 161, West Hurley, N.Y. 12491.

WANTED: RADIO PARTS and MAGAZINES '20s. Trade 2 Saturday Evening Post 4-12; National Geographic 8-18, 4-23. WANT BAKELITE PANELS. W6ME, 4178 Chasin Street, Oceanside CA 92054.

PUETT ELECTRONICS | PUETT ELECTRONICS | PUETT ELECTRONICS | PUETT ELECTRONICS | PUETT ELECTRONICS | PUETT ELECTRONICS

PUETT ELECTRONICS

P.O. BOX 28572 DALLAS TEXAS 75228

PUBLISHERS OF

THE CLASSIC RADIO NEWSLETTER

LIST NO. 12

HOW TO ORDER

(1) Make checks and money orders payable to PUETT ELECTRONICS.

(2) Please state whether new or used tubes are desired and whether a half-price used tube is desired when a new tube is out of stock. REFUNDS are mailed with your invoice for out-of-stock tubes, or when, by customer request, a used tube is substituted for an out-of-stock new tube.

(3) ALL ORDERS ARE SHIPPED PARCEL POST. NO C.O.D. INCLUDE 15% FOR POSTAGE AND HANDLING. INSURANCE RATES ARE 30¢ FOR ORDERS UNDER $50.00. TEXAS RESIDENTS ADD 5% STATE SALES TAX.

MINIMUM ORDER $3.00

CUSTOMER SATISFACTION GUARANTEED - If you are not satisfied with your order for any reason, tubes may be returned within ten days for refund or replacement with exception of tubes which are shorted or have open filaments. It will be assumed that returned tubes with open filaments or shorts were damaged in shipment. Shipping damage claims will be handled promptly through the post office on insured orders. PUETT ELECTRONICS assumes no liability for orders which are not insured, and no liability beyond that which is covered by postal insurance. ALL TUBES ARE THOROUGHLY TESTED ON A MUTUAL CONDUCTANCE TUBE CHECKER BEFORE SHIPMENT.

SCHEMATIC DIAGRAMS

WE CAN FURNISH SCHEMATIC DIAGRAMS AND TECHNICAL DATA ON ALMOST ANY RADIO FROM 1920 TO 1954 FROM OUR LIBRARY OF ORIGINAL MANUFACTURERS SERVICE DATA. Send a self-addressed stamped envelope and $1.50 per radio set. This offer is limited to five photocopied pages. If the data on your set exceeds five pages, we will send you a quote. State mfg. & model number.

THE CLASSIC RADIO NEWSLETTER
E.H. SCOTT & McMURDO SILVER:
Send a self-addressed stamped envelope for a sample issue. Send 30¢ in stamps plus a self-addressed stamped envelope for our list of classic radio literature. We sell, buy & trade classic radio literature.

TYPES 01A, 99, WD-11, etc.
We sometimes have these tubes in stock in very limited quantities. Send a self-addressed stamped envelope for information.

BALLAST TUBES - We can supply many types of ballast tubes or their equivalents. Send a self-addressed stamped envelope with your inquiry.

OLD RADIO TECHNICAL BOOKS - Send a self-addressed stamped envelope.

TABLE 1 - OLDER TYPE-NUMBER TUBES Prices listed for new tubes. Used tubes are half new tube price.

0A2	$2.	1LE3	$4.	5Y4	$3.	6F6	$3.	6U7	$4.	7Z4	$3.	14B5	$3.	35W4	$2.	81	$6.	5654	$2.
0A3	$2.	1LF3	$4.	5Z3	$3.	6F7	$6.	6V6	$2.	10	$6.	14B6	$3.	35Y4	$3.	82	$3.	5686	$3.
0A4	$2.	1LO5	$4.	5Z4	$3.	6F8	$3.	6V7	$4.	12A5	$4.	14B8	$3.	35Z3	$3.	83	$3.	5691	$3.
0B3	$2.	1LH4	$4.	6A3	$5.	6G5	$4.	6W6	$3.	12A6	$3.	14C5	$3.	35Z4	$3.	83V	$3.	5703	$3.
0C3	$2.	1LN5	$4.	6A4	$6.	6G6	$3.	6X4	$2	12A7	$4.	14C7	$3.	35Z5	$3.	84	$3.	5749	$2.
0D3	$2.	1N5	$4.	6A5	$4.	6H6	$2.	6X5	$2.	12A8	$3.	14E6	$3.	35Z6	$3.	85	$3.	5751	$2.
0Y4	$3.	1N6	$4.	6A6	$4.	6J5	$3.	6Y5	$3.	12AH7	$3.	14E7	$3.	36	$3.	89	$3.	5814	$2.
0Z4	$2.	1P5	$4.	6A7	$5.	6J6	$2.	6Y6	$2.	12AT6	$2.	14F7	$3.	37	$3.	117L7	$4.	5879	$2.
1A1	$5	1Q5	$4.	6A8	$3.	6J7	$3.	6Y7	$2.	12AT7	$2.	14F8	$3.	38	$3.	117M7	$4.	5881	$2.
1A3	$3.	1R5	$2.	6AB4	$3.	6J8	$3.	6Z4	$3.	12AU6	$2.	14H7	$3.	39	$3.	117N7	$7.	5992	$2.
1A4	$3.	1S4	$2.	6AB7	$3.	6K5	$3.	6Z5	$2.	12AU7	$2.	14J7	$3.	40	$6.	117P7	$7.	6080	$3.
1A5	$3.	1S5	$2.	6AC5	$3.	6K6	$3.	6Z7	$2.	12AV6	$2.	14N7	$3.	40Z5	$2.	117Z3	$4.	6146	$4.
1A6	$3.	1T4	$3.	6AC7	$3.	6K7	$3.	6ZY5	$3.	12AX7	$2.	14Q7	$3.	41	$3.	117Z4	$4.	6188	$3.
1A7	$3.	1T5	$3.	6AG7	$3.	6K8	$3.	7A4	$3.	12B7	$3.	14R7	$3.	42	$3.	117Z6	$4.	6AL2	$2.
1B4	$3.	1U4	$3.	6AK5	$2.	6L5	$4.	7A5	$3.	12B8	$4.	14W7	$3.	43	$3.	485	$4.	6973	$2.
1B5	$3.	1U5	$3.	6AK6	$2.	6L6	$3.	7A6	$3.	12BA6	$2.	14X7	$3.	44	$3.	807	$4.	7025	$2.
1B7	$3.	1V	$4.	6AL5	$3.	6L7	$3.	7A7	$3.	12BE6	$2.	15	$5.	45	$5.	809	$6.	7193	$2.
1B8	$3.	2A3	$6.	6AL7	$4.	6N5	$4.	7A8	$4.	12C5	$3.	19	$4.	45Z3	$2.	837	$4.	9002	$3.
1C1	$4.	2A4	$5.	6AQ5	$2.	6N6	$3.	7AE7	$4.	12C8	$3.	19T8	$2.	45Z5	$2.	843	$3.	9003	$3.
1C5	$3.	2A5	$4.	6AQ7	$4.	6N7	$3.	7AF7	$4.	12F5	$3.	22	$5.	46	$6.	879	$2.	9004	$4.
1C6	$3.	2A6	$3.	6AS7	$3.	6P5	$3.	7AG7	$4.	12H6	$3.	24A	$3.	47	$5.	884	$7.	VR-	
1C7	$5.	2A7	$5.	6AT6	$2.	6Q7	$3.	7B4	$3.	12J5	$3.	25A6	$3.	48	$4.	923	$3.	90	$2.
1D5	$5.	2B7	$3.	6AU6	$2.	6R7	$4.	7B5	$3.	12J7	$3.	25A7	$3.	49	$4.	930	$3.	VR-	
1D7	$5.	2C26	$2.	6AV5	$2.	6S4	$4.	7B6	$3.	12K7	$3.	25AC5	$3.	50	$6.	950	$3.	105	$2.
1D8	$4.	2E5	$4.	6AV6	$2.	6S8	$3.	7B7	$3.	12K8	$3.	25B6	$3.	50A5	$3.	951	$3.	VR-	
1D21	$3.	2E30	$2.	6AX5	$2.	6SA7	$2.	7B8	$3.	12L6	$2.	25C6	$2.	50B5	$2.	955	$4.	150	$2.
1E5	$5.	2V3	$4.	6B4	$5.	6SB7	$3.	7C5	$3.	12Q7	$3.	25L6	$3.	50C5	$2.	958	$4.	VT-	
1E7	$4.	2W3	$4.	6B5	$5.	6SC7	$3.	7C6	$3.	12S8	$3.	25S	$3.	50C6	$3.	1005	$3.	52	$4.
1F4	$4.	2X2	$2.	6B6	$5.	6SD7	$3.	7C7	$3.	12SA7	$3.	25Z5	$3.	50L6	$3.	E1148	$2.	XXB	$3.
1F5	$4.	3A4	$3.	6B7	$5.	6SF5	$3.	7B6	$3.	12SC7	$3.	25Z6	$3.	50X6	$3.	1201	$3.	XXFM	$3.
1F6	$4.	3A5	$3.	6B8	$3.	6SF7	$3.	7E7	$3.	12SF5	$3.	26	$4.	50Y7	$3.	1203	$3.	XXL	$3.
1F7	$5.	3A8	$3.	6BA6	$2.	6SG7	$3.	7F7	$4.	12SF7	$3.	26A6	$4.	51	$3.	1232	$3.		
1G4	$4.	3C6	$3.	6BE6	$3.	6SH7	$3.	7F8	$4.	12SG7	$3.	26A7	$4.	53	$5.	1273	$3.		
1G5	$4.	3LF4	$5.	6BA6	$2.	6SJ7	$3.	7G7	$3.	12SH7	$3.	27	$3.	55	$4.	1612	$3.		
1G6	$4.	3Q4	$3.	6C4	$2.	6SK7	$3.	7H7	$3.	12SJ7	$3.	28D7	$3.	56	$3.	1620	$3.		
1H4	$5.	3Q5	$3.	6C5	$3.	6SL7	$3.	7J7	$3.	12SK7	$3.	30	$3.	57	$3.	1625	$4.		
1H5	$3.	3S4	$2.	6C6	$3.	6SN7	$2.	7K7	$3.	12SL7	$3.	31	$3.	58	$3.	1626	$3.		
1H6	$3.	3V4	$2.	6C7	$4.	6SQ7	$3.	7L7	$3.	12SN7	$3.	32	$3.	59	$4.	1629	$4.		
1J6	$4.	5AZ4	$4.	6C8	$4.	6SR7	$3.	7N7	$4.	12SQ7	$3.	32L6	$3.	70A7	$3.	1633	$3.		
1L4	$4.	5R4	$2.	6CD6	$2.	6SS7	$3.	7Q7	$3.	12SR7	$3.	32L7	$2.	70L7	$3.	1634	$3.		
1L6	$6	5T4	$2.	6D6	$4.	6ST7	$3.	7R7	$3.	12V6	$3.	33	$3.	71A	$6.	1635	$3.		
1LA4	$4.	5U4	$2.	6D7	$4.	6SU7	$3.	7S7	$3.	12W6	$3.	34	$3.	75	$3.	1656	$3.		
1LA6	$4.	5V4	$2.	6D8	$4.	6SV7	$3.	7V7	$3.	12X4	$2.	35	$3.	76	$3.	1852	$3.		
1LB4	$4.	5V6	$2.	6E5	$4.	6T7	$4.	7W7	$3.	1223	$2.	35A5	$4.	77	$3.	1853	$3.		
1LC5	$5.	5W4	$2.	6E6	$4.	6T8	$2.	7X6	$3.	1A4A	$3.	35B5	$2.	78	$3.	2050	$3.		
1LC6	$4.	5X4	$3.	6E7	$4.	6U5	$4.	7X7	$3.	1A4S	$3.	35C5	$2.	79	$3.	2051	$3.		
1LD5	$4.	5Y3	$3.	6F5	$3.	6U6	$3.	7Y4	$3.	14A7	$3.	35L6	$3.	80	$3.	CK108	$3.		

COMPLETE CATALOG

SEND 50¢ IN STAMPS PLUS A SELF-ADDRESSED STAMPED ENVELOPE FOR OUR COMPLETE CATALOG. IN ADDITION TO TUBES AND SCHEMATIC DIAGRAMS, WE CAN ALSO SUPPLY KNOBS, DIAL ESCUTCHEONS, TUNING DRIVE BELTS, ANTIQUE TUBE CARTONS, OLD-STYLE GLASS ENVELOPE TUBES, SPECIAL TUBES FOR TUBE COLLECTORS, ANTIQUE WIRE, MORE RECENT TYPE-NUMBER AND TV TUBES, SPECIAL MAINTENANCE AND SERVICE NOTES ON SPECIFIC RADIO SETS, ANTIQUE RECORD CHANGER DATA, ANTIQUE PA SYSTEM DATA AND SCHEMATICS, OLD STYLE TUBE SHIELDS, AND SOME ORIGINAL PARTS FOR SETS.

IF YOU DO NOT SEE A TUBE WHICH YOU SEEK LISTED, SEND A SELF-ADDRESSED STAMPED ENVELOPE. WE MAY BE ABLE TO RECOMMEND A SOURCE OF SUPPLY.

MILITARY TYPE (VT) AND EQUIVALENT COMMERCIAL-TYPE TUBE CROSS-REFERENCE LIST Send $1.00 plus a self-addressed stamped envelope.

We offer free technical advice for a self-addressed stamped envelope or you may call J.W.F. Puett at 214 - 279-8309 NO LATER THAN 10:00 PM CENTRAL STANDARD TIME OR CENTRAL STANDARD DAYLIGHT TIME (when applicable) PLEASE.

TABLE 2 - OLD STYLE TUBES All are new many in original cartons:

RADIOTRON		MAJESTIC	
UY227	$5.	G4S	$5.
CUNNINGHAM		2A6	$4.
C327	$5.	2B7	$3.
CX345	$6.	Q31	$4.
CX347	$6.	6C7	$4.
CX371A	$7.	6D7	$4.
EVEREADY		6E7	$4.
ER551	$4.	46B1	$5.
		G46A1S	$5.
		G6Z5	$3.

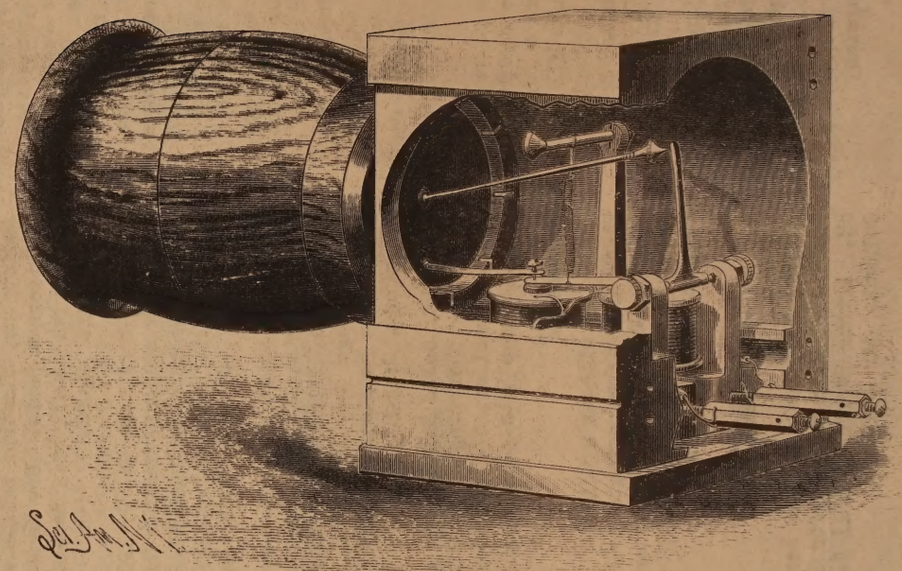
We have many others used such as W.E. 205D at $6. Send self-addressed stamped envelope for list.

PUETT ELECTRONICS | PUETT ELECTRONICS | PUETT ELECTRONICS | PUETT ELECTRONICS | PUETT ELECTRONICS | PUETT ELECTRONICS

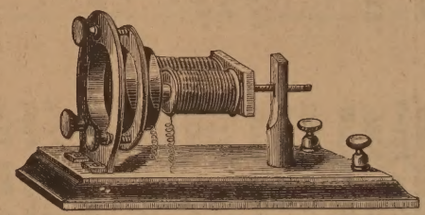
NOVEMBER 75c

THE HORN SPEAKER

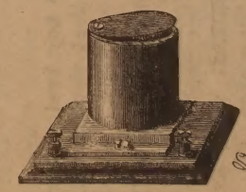
1975



THE HOUSE TELEPHONE.



About 1868 Royal C. House, an American inventor whose printing telegraph had awakened universal interest, invented what he termed an electro-phonetic receiver for his telegraph. His idea was to produce an instrument which, precisely like the modern telephone, would produce an audible sound upon receiving a weak current of electricity. It consisted of a box closed with a diaphragm, against which two rods were pressed endwise by the rocking or pivoted armature of an electromagnet, so that in its motions the armature would alternately push against one or the other rod. The electromagnet was actuated by weak currents, and an ear placed opposite an ear piece leading to the diaphragm received the sound. This instrument is a telephone far superior to Bell's original invention, although its inventor had not the least idea of its capabilities for the transmission of articulate speech.



Scientific American.

JULY 25, 1896.

BELL'S EARLY TELEPHONE.

Mr. Lee A. Davis
Route 3, Box 2203
Sumner, Wash. 98390